Use of information and communication technology to improve dietary assessment and tackle obesity

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Information and communication technology is a promising new route to deliver public health interventions. Our hypothesis is that specifically tailored ICT methods can be successfully implemented to assess dietary exposures and to aid weight loss and maintenance.

Tackling obesity with a smartphone application, “MMM” (My Meal Mate)

We have developed a smartphone app for weight loss called “My Meal Mate” (MMM). System users self-monitor their energy intake and physical activity and receive feedback instantly and by SMS. MMM has been trialled for 7 days in a validation study (n=50) and for 6 months in a pilot trial with overweight/obese adults (n=128) recruited from large employers in Leeds. Pilot trial participants were randomised to three arms; MMM, paper diary and online food diary.

Improving dietary assessment with an online 24 hr recall tool, “MYFOOD” (Measure your food on one day)

We are designing a UK online 24 hr recall based on the automated multiple pass method. “MYFOOD” contains an extensive branded food and drink database and is being designed to assess diet in adolescents, adults and older people. Development will be iterative;

• Focus groups have been conducted with adults (n=30) to inform initial development.
• More focus groups are planned with adolescents and older people.
• User groups will provide feedback on a “clay model” and further usability testing will be conducted with a beta version.

Adherence to the interventions in a randomised 3 arm (MMM app, paper food diary, online food diary) pilot trial. Self monitoring declined in all 3 arms over 6 months but total days usage was highest in the MMM group (p<0.0001).

Existing tools that have been reviewed

- ASA24 – Dr Amy Subar et al, NCI, USA
- DIETDAY – Dr Lenore Arab et al, USA
- NUTRINETSANTE – Dr Serge Hercberg et al, France

The project is in collaboration with Imperial College, London. Funded by the MRC.